



DIRECTORATE OF HEALTH CARE STUDIES AND CLINICAL INVESTIGATION

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FLUORIDATION STATUS
OF U.S. ARMY
CONUS INSTALLATIONS

September 1993 CR 93-003

93-28512

UNITED STATES ARMY

MEDICAL DEPARTMENT CENTER AND SCHOOL
FORT SAM HOUSTON, TEXAS 78234-6100

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EXECUTIVE SUMMARY

At the requests of the Division of Oral Health of the Centers for Disease Control and the Director of Dental Services, Health Services Command (HSC), a cross-sectional study was initiated to determine the fluoridation status of Army community drinking water. All HSC DENTACs and the majority of the subcommands participated in the survey.

Fifty-eight installations reported fluoride levels within the optimal range (0.7 to 1.2 ppm) while 16 installations reported fluoride concentrations below 0.7 ppm and 3 reported levels above 1.2 ppm.

The results suggest that greater efforts must be employed to insure all installation water supplies provide optimal levels of fluoridation in order to derive maximum effectiveness and to prevent the development of dental fluorosis.

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Background

Water fluoridation has been the dominant factor in the declining prevalence of dental caries in the United States. In the most recent national survey of U.S. school children (1986-1987), nearly 50 percent of school children had permanent dentition that was caries-free (1). At approximately 51 cents per individual per year, community fluoridation is the most cost-effective approach to provide fluoride to children (2). Today, over 135 million people (54.5%) are drinking optimally fluoridated water in the U.S. (3). The recommended optimal level in the U.S. ranges from 1.2 parts per million (ppm) to 0.7 ppm based on the annual average of maximum daily air temperature (4). (See Figure)

For the past 14 years the Division of Oral Health of the Centers for Disease Control (CDC) in Atlanta has monitored the fluoridation status of drinking water in the U.S. A reporting system forwards information from the states to CDC. However, similar data has not been reported by military installations.

This report provides the Army Dental Care System and CDC with a cross-sectional study of the fluoridation status for the majority of Army DENTACs and subcommands.

Methods

To gather data on fluoridation status, a data collection form (Appendix A) was sent to all HSC DENTACs. The tasking (Appendix B) requested the following information:

- 1. The source of water. Does the installation use water from a civilian source or does it have its own source of water, such as a well?
- 2. The most recently available fluoride concentration per water source and date the water was analyzed.
- 3. The process of fluoridating or defluoridating water.
 - a. Are chemicals used in the fluoridation process? The three most common chemicals are sodium fluoride (NaF), sodium fluorosilicate (NaSiF6), and fluorosilicic acid (H2SiF6).
 - b. Is the water defluoridated? Some installations are supplied water which is naturally fluoridated above optimal limits and there is need to remove a portion of the fluoride content for drinking purposes. The five most common types of defluoridators are coagulation/flocculation, ion-exchange, reverse osmosis, electrodialysis, and reversible adsorption onto activated alumina.

- 4. Type of fluoridation system. Does the water come from the ground or surface?
- 5. Post population. The number of people residing on the installation.

Results

All 37 DENTACs completed the tasking (Table). Of the 70 Army installations, 45 are post and 23 community treated systems. Two installations have both base and community systems providing drinking water to the post population.

Fifty-eight installations reported a fluoride level within the optimal range from 0.7 to 1.2 ppm. However, 16 installations reported a fluoride concentration below 0.7 ppm while 3 installations reported levels above 1.2 ppm.

Cf the chemicals used in treating drinking water supplies, 12 posts reported using sodium fluoride (NaF), 19 sodium fluorosilicate (NaSiF6), and 27 fluorosilicic acid (H2SiF6). Three installations used a combination of chemicals. Seven reported using no chemicals with 4 recording below 0.7 ppm levels of fluoride in the drinking water. Defluoridation was used at two installations, one of which reported a fluoride concentration below 0.7 ppm.

The source of drinking water among the installations was nearly evenly divided with 31 reporting ground water and 34 surface water. Five installations indicated the source of drinking water was from both ground and surface.

The final question was asked to capture the number of soldiers and their families residing on the installation. The total post population was over 680,000 with approximately 100,000 drinking water below the optimal range. Less than 5% of post residents had drinking water supplies greater than 1.2 ppm.

Conclusion

There is ample evidence that water fluoridation, whether natural or adjusted at the optimal concentration, will significantly reduce dental caries. However, water supplies below optimal levels will reduce the effectiveness of water fluoridation and those supplies above optimal levels may lead to dental fluorosis. Although this report only informs the commanders on fluoride concentrations for a specific date, it should constitute the first step in obtaining more complete data in the future.

Army Regulation 40-35 (Appendix C) calls for preventive medicine activity and post or installation engineers to regulate and monitor the fluoride concentration in drinking water for Army installations. However, the dental fitness officer and/or community health dental hygienist need to carefully review the fluoride status of post drinking water and advise the preventive medicine officer if the concentration is not within the optimal range.

Recommendation

 A conference for all dental fitness officers and community health dental hygienists should be held annually to update those individuals on the most current preventive dentistry techniques.

References

- 1. National Institute of Dental Research. (1989). Oral Health of United States Children: The National Survey of Dental Caries in U.S. School Children: 1986-1987, National and Regional Findings (NIH Publication No. 89-2247). Bethesda, Maryland: U.S. Department of Health and Human Services, Public Health Service.
- 2. Burt B.A. (1989). Workshop on cost-effectiveness of caries prevention in dental public health. <u>Journal of Public Health Dentistry</u>, 49, 331-337.
- 3. Centers for Disease Control. (1991). <u>Fluoridation census</u>
 <u>1989: Summary</u>. Atlanta: U.S. Department of Health and Human Services, Public Health Service.
- 4. Centers for Disease Control. (1991). <u>Water fluoridation-a</u> manual for engineers and technicians. Atlanta: U.S. Department of Health and Human Services, Public Health Service.

TABLE

Fluoridation Status of Army Installations in Health Services Command

Fluoridation Status of Army Installations in Health Services Command: April 1993

DENTAC	State	Water Source	Date Tested	PPM F	Chemical Used	Water	Post Census
ALASKA DENTAC	AK						
Fort Wainwright		Post	25 Mar 93	1.12	NaSiF	Ground	12,768
Fort Richardson		Post	29 Mar 93	0.63	NaSiF	Surface	11,581
Fort Greeley		Civilian	29 Mar 93	1.38	NaSif	Ground	1,559
FORT BELVOIR	VA	Civilian	Feb 93	0.69	NaSiF	Surface	16,000
Vint Hill Farms		Post	Feb 93	0.84	NaF	Ground	4,000
FORT BENNING	3A	Post	9 Apr 33	1.00	NaSiF	Surface	14.334
FORT BLISS (1)	TX	Post	9 Oct 91	1.00	None	Ground	28,008
(2)		Civilian	Mar 93	0.88	None	Ground	
White Sands	ÆN	Post	9 Mar 93	0.74	H2SiF,	Ground	9,250
FORT BRAGG	NC	Post	30 Mar 93	1.18	H,SiF,	Surface	33,795
FORT CAMPBELL	KY	Post	23 Mar 93	1.09	NaSiF,	Surface	38,110
FORT CARSON (1)	8	Civilian	Mar 93	1.20	None	Surface	26,414
(2)		Civilian	Mar 93	0.54	None	Surface	

DENTAC	State	Water Source	Date Tested	PPM F	Chemical Used	Water	Post
FORT DEVENS (1)	MA	Post	28 Feb 93	1.00	NaF	Ground	7,503
(2)		Post	28 Feb 93	1.00	NaF	Ground	
FORT DRUM (1)	ΝΧ	civilian	17 Mar 93	1.20	H2SiF,	Surface	7,285
(2)		Post	30 Aug 92	0.58	NaF	Ground	
Seneca Dept	NX	Post	23 Mar 93	1.00	H,SiF,	Ground	295
FORT EUSTIS	VA	Civilian	25 Mar 93	08.0	H2SiF6	Surface	10,500
Fort Monroe (1)	VA	Civilian	4 Apr 93	0.95	NaSiF	Surface	2,785
(2)		Civilian	24 Mar 93	0.88	NaSiF	Surface	
Fort Storey (1)	VA	Civilian	26 Mar 93	0.95	NaSiF	Surface	3,064
(2)		civilian	26 Mar 93	06.0	NaSiF	Ground	
FITZSIMMONS AMC	8	Civilian	22 Mar 93	1.02	NaF	Ground	418
Dugway	UT	Post	9 Mar 93	0.82	NaF	Ground	2,081
FORT GORDON	GA	Post	Jan 93	1.25	H2SiF6	Surface	26,931
Fort McPherson	GA	Civilian	Mar 93	0.91	H2SiF6	Surface	2,184
Fort Buchanan	PR	Civilian	8 Apr 93	0.10	None	Surface	1,721
FORT HOOD	TX	Civilian	8 Mar 93	1.00	NaSiF	Surface	20,647

DENTAC	State	Water Source	Date Tested	PPM F	Chemical	Water	Post
HAWAII (Schofield)	HI	Post	Feb 93	09.0	NaF	Ground	26,761
Aliamanu		Post	Feb 93	0.50	NaF	Ground	9,249
Tripler		Post	Feb 93	0.40	NaF	Ground	2,700
Shafter		Post	Feb 93	09.0	NaF	Ground	5,400
Wheeler AAB		Post	Feb 93	0.70	NaF	Ground	1,800
FORT HUACHUCA	AZ	Post	18 Mar 93	1.00	NaF	Ground	8,821
Yuma		Post	13 Mar 93	1.00	Electro- dialysis reversal	Ground	1,200
FORT IRWIN	CA	Post	6 Apr 93	0.55	Reverse Osmosis	Ground	7,678
FORT JACKSON	SC	Civilian	24 Mar 93	0.89	NaSiF	Surface	25.000
FORT KNOX	KX	Post	24 Feb 93	1.05	NaSiF	Surface	32.038
FORT LEAVENWORTH	KS	Post	24 Mar 93	0.98	H,SiF,	Ground	11.104
FORT LEE (1)	VA	Civilian	29 Mar 93	0.94	H ₂ SiF ₆	Surface	4,037
(2)		Civilian	29 Mar 93	1.00	H2SiF,	Surface	
Fort Pickett		Post	12 Nov 92	0.10	None	Surface	105
Def Gen Sup Ctr		Civilian	19 Mar 92	0.94	H ₂ SiF ₆	Surface	97
FORT LEONARD WOOD	MO	Post	29 Mar 93	1.08	H,SiF,	Surface	22,000

DENTAC	State	Water Source	Date Tested	PPM F	Chemical Used	Water	Post
FORT LEWIS (1)	WA	Post	1.6 Feb 93	1.10	NaSiF	Ground	18,476
(2)		Post	16 Feb 93	1.10	NaF	Ground	
FORT MCCLELLAN	AL	Civilian	8 Mar 93	1.00	H,SiF,	Surface	7.816
FORT MEADE (1)	MD	Post	8 Mar 93	1.01	H ₂ SiF ₆	Ground/	28,000
						Surface	
(2)		Post	8 Mar 93	1.00	H,SiF,	Ground	
Aberdeen	Æ	Post	16 Mar 93	1.00	NaSiF	Surface	12,000
Carlisle	PA	Post	8 Feb 93	2.10	H2SiF,	Ground	1,565
Edgewood	MD	Post	16 Mar 93	1.00	NaSiF	Surface	009'9
Fort Ritchie	MD	Post	28 Feb 93	0.98	NaF	Ground	1,100
Fort Detrick	ΨD	Post	25 Mar 93	1.00	H,SiF,	Surface	3.500
FORT MONMOUTH	CN	Civilian	9 Mar 93	1.00	H2SiF6	Surface	3,423
Fort Dix (1)	ĊN	Post	12 Mar 93	0.15	NaF	Surface	719
(2)		Post	12 Mar 93	0.07	NaF	Ground	
Fort Hamilton	NX	Civilian	24 Mar 93	08.0	H,SiF,	Ground	1,105

DENTAC	State	Water Source	Date Tested	PPM F	Chemical Used	Water	Post
FORT ORD	C.A.	Post	9 Mar 93	1.00	NaSiF	Ground	15,000
Hunter Liggett	CA	Post	9 Mar 93	0.30	None	Ground	009
Presidio of Monterey	CA	civilian	8 Mar 93	1.00	H2SiF,	Ground/ Surface	5,000
PANAMA							
Forts Davis, Espinar, Sherman		Post	17 Mar 93	0.70	NaSiF	Surface	3,208
Fort Clayton		Post	15 Mar 93	0.70	NaSiF	Surface	8,000
PRESIDIO OF SAN FRANCISCO	СA	Post	23 Mar 93	1.00	NaSiF	Surface	3,507
Sierra Depot	CA	Post	Feb 93	0.76	None	Ground	500
FORT POLK	LA						7,471
North Fort Housing		Post	11 Mar 93	06.0	H2SiF,	Ground	
North Fort		Post	11 Mar 93	1.00	Natural	Ground	
South Fort		Post	11 Mar 93	0.40	H2SiF,	Ground	
REDSTONE (1)	AL	Post	9 Mar 93	1.05	None	Surface	2,512
(2)		Post	9 Mar 93	96.0	None	Surface	
FORT RILEY	KS	Post	4 Mar 93	0.86	H,SiF,	Ground	22,293

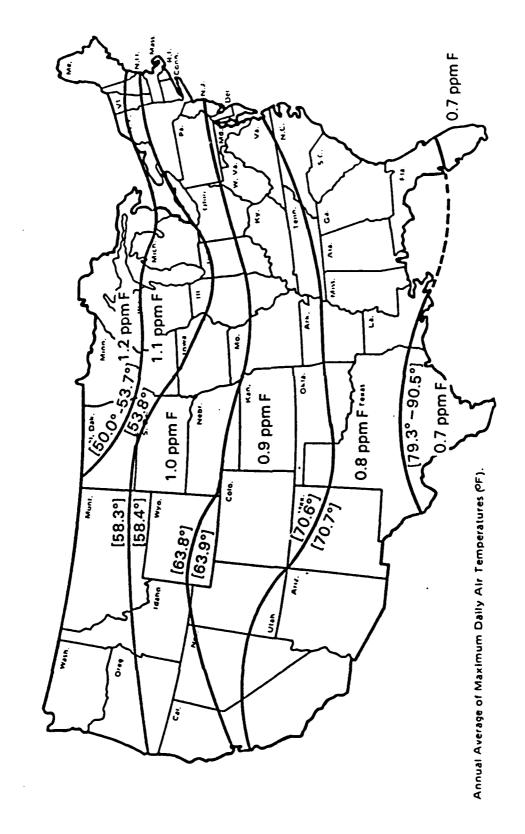
DENTAC	State	Water Source	Date Tested	PPM F	Chemical Used	Water	Post
FORT RUCKER	AL						16,988
Well #3		Post	28 Feb 93	1.02	H,SiF,	Ground	
Well #6		Post	28 Feb 93	1.04	H,SiF,	Ground	
Well #7		Post	28 Feb 93	1.05	H ₂ SiF ₆	Ground	
Well #8		Post	28 Feb 93	0.89	H ₂ SiF ₆	Ground	
Well #9		Post	28 Feb 93	0.81	H ₂ SiF ₆	Ground	
Well #10		Post	28 Feb 93	0.89	H2SiF	Ground	
Well #11		Post	28 Feb 93	1.02	H ₂ SiF ₆	Ground	
FORT SAM HOUSTON	TX	Post	16 Mar 93	06.0	H,SiF,	Ground	8,185
FORT SILL	OK	civilian	10 Mar 93	0.97	NaSiF	Surface	20,000
Fort Chaffee	AK	Civilian	26 Mar 92	0.20	None	Surface	250
FORT STEWART (1)	GA	Post	29 Mar 93	0.74	H2SiF6	Ground	22,188
(2)		Post	29 Mar 93	0.47	H ₂ SiF ₆	Ground	
(3)		Post	29 Mar 93	0.54	H2SiF6	Ground	
Hunter AAF (1)	GA	Post	31 Mar 93	0.89	H,SiF,	Ground	908'5
(2)		Post	31 Mar 93	1.07	H,SiF,	Ground	

DENTAC	State	Water Source	Date Tested	PPM F	Chemical Used	Water	Post
WALTER REED AMC	20	Civilian	31 Mar 93	1.00	1.00 H2SiF6	Surface	533
Fort McNair	DC	Civilian	31 Mar 93	1.00	1.00 H2SiF	Surface	3,000
Fort Myer	VA	Civilian	30 Mar 93	1.00	1.00 HzsiF	Surface	3,500
WEST POINT	NX	Post	23 Mar 93	1.04	1.04 NaSiF	Surface	8,757
Stewart AAF	NY	Civilian	23 Mar 93		1.00 H2SiF	Surface	2,362

FIGURE

Public Health Service's Optimal Fluoride Levels in U.S.

FIGURE OPTIMAL FLUORIDE LEVELS IN U.S.



APPENDICES

APPENDIX A

Data Collection Form for Each Water Source

DATA COLLECTION FORM FOR EACH WATER SOURCE

			Water Source	urce	S	Chemical Used	sed	Type of	Type of System	Defi	Defluoridation Status	Status	
	ppm F	Date	Civil Govt.)#t.	NaF	NaSiF,	NaSiF, H ₂ SiF,	Ground	Ground Surface Water Water	Not Needed	Present on Post	Type of System	Post Population
Primary,													
or only water													
Secondary				Ť									
water			•		•		-						
Other													
water													
source				_									

APPENDIX B

Tasking to HSC DENTAC Commanders Requesting Community Water Fluoridation Status



DEPARTMENT OF THE ARMY HEADQUARTERS, UNITED STATES ARMY HEALTH SERVICES COMMAND FORT SAM HOUSTON, TEXAS 78234-6000



REPLY TO ATTENTION OF:

S: 29 March 1993

HSDS

3 March 1993

MEMORANDUM FOR Commander, HSC DENTAC

SUBJECT: Community Water Fluoridation Status

- 1. Request you provide the following data using the enclosed data collection form for each source of drinking water on Army installations within your catchment. Please use one form for each installation. For example, Fort Meade Dental Activity (DENTAC) has 4 subcommands (Aberdeen Proving Ground, Carlisle Barracts, Fort Detrick, and Fort Ritchie). Please use 5 separate data collection forms for Fort Meade DENTAC. Each installation will have one or more water sources as indicated on the form. Data to be collected includes:
- a. The most recently available fluoride concentration per water source, and date water was analyzed.
- b. The source of the water. Does the installation use water from the civilian community or does it have its own source of water, such as a well?
- c. The type of chemicals used in the fluoridation. The three most common chemicals are sodium fluoride (NaF), sodium fluorosilicate (NaSiF6), and fluorosesilicic acid (H2SiF6).
- d. Type of fluoridation system. Does the water come from the ground or surface?
- e. Defluoridation status. Some installations are supplied water which is naturally fluoridated above optimal limits and there is need to remove a portion of the fluoride content for drinking purposes. The five most common types of defluoridator are coagulation/flocculation, ion-exchange, reverse osmosis, electrodialysis, and reversible sorption onto activated alumina.
- f. Post population. The number of people residing on the installation.
- 2. Your DEH should be able to answer most of these questions.

HSDS

SUBJECT: Community Water Fluoridation Status

3. Our point of contact is LTC James Lalumandier, U.S. Army Health Care Studies and Clinical Investigation Directorate, Dental Studies Division, Fort Sam Houston, Texas 78234-6060, FAX (210) 554-4745, DSN 471-0331; COMM: (210) 221-0331.

Encl

PATRICK D. SCULLEY Colonel, DC Director of Dental Services

APPENDIX C

Army Regulation 40-35

Army Regulation 40-35

Medical Services

Preventive Dentistry

Headquarters
Department of the Army
Washington, DC
26 March 1989

SUMMARMICHANGE

AR 40-35 Preventive Dentistry

This change 1 changes the--

- o Dental fitness Class 4 classification (para 6).
- o Preventive Dentistry Report (RCS MED-399) to a semiannual requirement (para 10).

Effective 25 April 1989

Medical Services

Preventive Dentistry

This publication was last revised on 1 March 1987.

This UPDATE printing publishes a change 1. The portions being changed are highlighted.

By Order of the Secretary of the Army:

CARL E. VUONO General, United States Army Chief of Staff

Official:

Milton H. HAMILTON

MILTON H. HAMILTON
Administrative Assistant to the
Secretary of the Army

Summary. This regulation on preventive dentistry has been completely revised. It implements DODI 6230.3; defines the four programs that comprise the Army Preventive Dentistry Program; fixes responsibility for administration and implementation of the Army Preventive Dentistry Program; defines procedures for executing the Army Preventive Dentistry Program; defines the dental fitness classification scheme and sets forth procedures for assigning dental fitness classes; and fixes responsibilities and establishes procedures for completing and forwarding the Preventive Dentistry Report.

Applicability. This regulation applies to the Active Army, Army National Guard (ARNG), and U.S. Army Reserve (USAR).

Impact on New Manning System. This regulation does not contain information that affects the New Manning System.

Internal control systems. This regulation is subject to the requirements of AR 11-2. It contains internal control provisions but does not contain checklists for conducting internal control reviews. These checklists are being developed and will be published at a later date.

Supplementation. Supplementation of this regulation and establishment of command and local forms are prohibited without prior approval from HQDA (DASG-DC), 5109 Leesburg Pike, Falls Church, VA 22041-3258.

Interim changes. Interim changes to this regulation are not official unless they are authenticated by the Administrative Assistant to the Secretary of the Army. Users will destroy interim changes on their expiration

dates unless sooner superseded or rescinded.

Suggested Improvements. The proponent agency of this regulation is the Office of The Surgeon General. Users are invited to send comments and suggested improvements on DA Form 2028 (Recommended Changes to Publications and Blank Forms) directly to HQDA (DASG-DC), 5109 Leesburg Pike, Falls Church, VA 22041-3258.

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1. Purpose

This regulation provides guidance for the development and conduct of preventive dentistry programs for all authorized beneficiaries of the U.S. Army Dental Care System. It describes the Oral Health Fitness Program for active duty soldiers and other programs that benefit all members of the Army community.

2. References

- a. Required publications.
- (1) AR 40-5, Preventive Medicine. (Cited in para 5g(2).)
- (2) AR 40-66, Medical Record and Quality Assurance Administration. (Cited in para 6c(2)(f).)
- (3) AR 608-1, Army Community Service Program. (Cited in para 9c.)
- (4) TB MED 576, Occupational and Environmental Health Sanitary Control and

Surveillance of Water Supplies at Fixed Installations. (Cited in paras 5i(3) and 9a(1)(c).)

- b. Related publications. A related publication is merely a source of additional information. The user does not have to read it to understand this regulation. The following are related publications:
- (1) AR 40-3, Medical, Dental, and Veterinary Care.
- (2) AR 40-121, Uniformed Services Benefits Program:(Rescinded.)
- c. Referenced form. SF Form 603, Health Record—Dental.

3. Explanation of abbreviations

- a. CHDH—community health dental hygienist
 - b. DENTAC—dental activity
 - c. DFO-dental fitness officer
- d. DODDS—Department of Defense Dependent Schools

^{*}This regulation supersedes AR 40-35, 25 February 1972.

- e HSC-US Army Health Services Command
- f PDPC—Preventive Dentistry Program for Children
 - g. TSG-The Surgeon General

4. Scope of the program

The Army Preventive Dentistry Program includes the following separate programs:

- a. Oral Health Fitness Program. (See para 6.)
- b. Preventive Dentistry Program for Children. (See para 7.)
- c. Clinical Preventive Dentistry Program. (See para 8.)
- d. Community Preventive Dentistry Program. (See para 9.)

5. Responsibilities

- a. The Surgeon General (TSG) will establish policy concerning the Army Preventive Dentistry Program.
- b. The Assistant Surgeon General for Dental Services will—
- (1) Make recommendations to TSG concerning the Army Preventive Dentistry Program.
- (2) Appoint a dental officer as consultant in public health dentistry.
- (3) Advise TSG on the dental fitness of the Active Army.
- (4) Advise the Assistant Secretary of Defense (Health Affairs) on the dental fitness of the Army.
- c. The consultant in public health dentistry appointed by TSG will—
- (1) Advise on all matters pertaining to public health dentistry and preventive dentistry.
- (2) Report annually on the status of the Army Preventive Dentistry Program.
- d. The Commanding General, U.S. Army Health Services Command (CG, HSC) and commanders of major overseas commands will—
- (1) Assume responsibility for the administration of policies in this regulation.
- (2) Appoint a dental officer as consultant in preventive dentistry for the command.
- e. Preventive dentistry consultants for HSC and major oversea commands will—
- (1) Report quarterly on the dental fitness status of Active Army soldiers within their command as prescribed by this regulation. Semiannually consolidate Preventive Dentistry Report information from all subordinate units and submit it to the TSG Consultant for Dental Public Health.
- (2) Advise the Assistant Surgeon General for Dental Services on their command's preventive dentistry program.
- (3) Monitor and evaluate their command's operation of the Preventive Dentistry Program for Children, the Clinical Preventive Dentistry Program, and the Community Preventive Dentistry Program.
- f. Commanders of dental activities (DENTACs) and dental units will—
- (1) Ensure that the policies in this regulation are followed.

- (2) Appoint on orders a dental officer as the DENTAC/dental unit preventive dentistry/dental fitness officer (DFO)
- (3) Appoint, if appropriate, additional officers to represent designated units, activities, or patient catchment areas on the installation.
- (4) Advise unit commanders on a monthly basis on the dental fitness of their command by dental fitness classification.
- g. Commanders, U.S. Army medical activities and commanders, U.S. Army medical centers will—
- (1) Provide the necessary administrative and logistical support required to help ensure a successful preventive dentistry program.
- (2) Forward to higher headquarters a copy of the Command Health Report (RCS MED-3(R7)) to include the portion pertaining to environmental sanitation concerning the water supply per AR 40-5, paragraph 3-8c(1).
- (3) Advise the DENTAC commander when water supply fluoridation standards are not met.
- h. Commanders of units supported by the Oral Health Fitness Program will—
- (1) Monitor dental appointments within their units and attempt to reduce failed appointments.
- (2) Make personnel available to receive dental care.
- (3) Make personnel in dental fitness Class 3 or 4 who are assigned to rapid deployment units available for expedited treatment.
- (4) Coordinate with the DENTAC/dental unit commander for available treatment time.
- (5) Coordinate with the DENTAC/dental unit commander to audit and monitor dental health records and accountability of records.
- (6) Coordinate and establish with the DENTAC/dental unit commander dental fitness goals consistent with mission requirements.
 - i. The dental fitness officer will-
- (1) Assist DENTAC commanders/dental unit commanders/directors of dental services in implementing the Army Preventive Dentistry Program.
- (2) Plan, organize, implement, and evaluate the activities of the Oral Health Fitness Program, the Preventive Dentistry Program for Children, the Clinical Preventive Dentistry Program, and the Community Preventive Dentistry Program. Where appropriate, the DFO may seek the assistance of the community health dental hygienist (CHDH) in implementing these programs.
- (3) Coordinate with the preventive medicine activity and post or installation engineers in monitoring the post or installation water fluoridation system. (See TB MED 576.)
- (4) Submit through DENTAC commanders/dental unit commanders/directors of dental services a quarterlysemiannual report on the Army Preventive Dentistry Program. (See para 10.)

- (5) Encourage all dental personnel to take an active part in the Army Preventive Dentistry Program Provide officer, enlisted, and civilian personnel with current information on all aspects of preventive dentistry and dental public health programs
- J The community health dental hygienist, where assigned, will assist the DFO as requested. Pesponsibilities will include the planning, development, and administration of the Army Preventive Dentistry Program.
- k. Officer, enlisted, and civilian dental staff of all DENTACs/dental units will conduct clinical operations consistent with good preventive practice and support community preventive dentistry programs conducted by the dental unit.

6. Oral Health Fitness Program

Responsibility for dental fitness is shared by commanders, the dental care system, and the soldier. The primary focus of this program is to ensure that soldiers do not become "noncombat dental casualties." Within this program, the dental care system has responsibilities for fitness classification, a yearly 100 percent audit of records to ensure accuracy of classification, and dental treatment of soldiers to achieve a satisfactory dental fitness level. The responsibility for personnel accountability, notification, and patient availability rests with installation personnel support activities and unit commanders.

a. Dental classification.

- (1) Dental fitness Class 1—soldiers who require no dental treatment. (On examination, no further dental appointments are given or recommended; for example, if there are missing teeth and no replacement is recommended, the patient is in Class 1.)
- (2) Dental fitness Class 2—soldiers whose existing dental condition is unlikely to result in a dental emergency within 12 months.
- (3) Dental fitness Class 3—soldiers who require dental treatment to correct a dental condition that is likely to cause a dental emergency within 12 months.
- (4) Dental fitness Class 4—soldiers who require a dental examination and those whose fitness status is unknown/or those soldiers who do not have confirmation of a duplicate panograph on file at the central panographic storage facility. Active duty soldiers who miss a second annual examination are automatically placed in fitness Class

b. Procedures.

- (1) Soldiers' records will be screened on arrival at a new permanent duty station.
- (a) Those soldiers whose records indicate no examination in the past year or who are classified in Class 3 or 4 will have a dental fitness examination within 60 days following the records screening. Once a newly arrived soldier classified in Class 3 or 4 is examined and removed from Class 3 or 4, his or her next annual examination will be 1 year from the last treatment.
- (b) Those soldiers whose records indicate they are in Class 1 or 2 will have their next

annual examination. I year from the completion of their last course of treatment or last examination.

- (c) Records will also be screened to ensure a panographic radiograph is present in the record, to ensure it is of adequate quality for identification purposes, and to ensure that a duplicate has been forwarded and received by the central panographic storage facility. If no panographic radiograph is present, one will be taken and placed in the dental record, and a duplicate forwarded.
- (2) Soldiers in basic training or advanced individual training will not be required to have a dental fitness examination until they have reached their first permanent duty station.
- (3) Soldiers will have their dental fitness classification updated annually by a clinical examination. Soldiers who miss a second annual examination will be placed in dental fitness Class 4.
- (4) Appointments for dental treatment required to achieve a satisfactory dental fitness status will be provided.
- (a) Soldiers in dental fitness Class 1 require no treatment.
- (b) Soidiers in dental fitness Class 2 will be counseled on their dental needs and given an opportunity for dental treatment as requested.
- (c) Soldiers in dental fitness Class 3 will have the condition causing the potential dental emergency described in the narrative portion of their SF Form 603 (Health Record—Dental) so they may be reclassified to Class 1 or 2 as soon as the condition is corrected. Personnel in dental fitness Class 3 will receive expedited treatment to remove them from this unsatisfactory dental classification. The immediate goal of expedited treatment is to take care of the patient's most urgent dental fitness needs and eliminate a probable dental emergency.
 - c. Organizational responsibilities.
- (1) Units. The unit commander is responsible for the dental fitness of his or her soldiers. The unit commander will establish procedures to carry out the requirements of the Oral Health Fitness Program. Commanders will make their personnel available for participation in the Oral Health Fitness Program and maintain surveillance over the program to ensure the following:
- (a) Newly arrived soldiers' dental records will be submitted to the supporting dental unit as part of the in-processing procedure. The supporting dental unit will be requested to screen dental records to establish the dental fitness status (classification) of each newly arrived soldier.
- (b) Soldiers identified in dental fitness Class 3 or 4 will be made available to the dental facility for expedited treatment, so they do not remain in Class 4 for over 60 days after arrival or in Class 3 for over 6 months after arrival.
- (c) All soldiers in the unit will receive an annual dental examination. The unit (or its supporting personnel activity) will—

- 1. Provide current rosters of soldiers in the unit to the dental facility that supports the soldier.
- 2. Notify soldiers of the suspense for their annual dental examination and renotify them in case of noncompliance.
- 3. Make soldiers identified as Class 3 or 4, or soldiers who require an annual dental examination, available for compliance with the program.
- 4. Establish procedures to deal with soldiers who are in repeated noncompliance.
- (d) Emphasis will be placed on ensuring that soldiers being newly assigned to recruiting duty, full-time manning programs for the Reserve Components, Reserve Officers' Training Corps duty, and Military Assistance Group or Embassy duty are in Class 1 or 2 before departing for their new assignments.
- (e) Emphasis will be placed on ensuring that soldiers in rapid deployment forces are maintained in a Class 1 or 2 status.
- (2) DENTAC/dental units. DENTAC/dental unit commanders are responsible for assisting supported units in maintaining the oral fitness of soldiers. DENTAC/dental unit commanders will perform the following functions:
- (a) Serve as advisors to unit commanders in determining appropriate dental fitness levels for the unit.
- (b) Screen dental records of newly arrived soldiers to establish their dental fitness classification.
- (c) Assist unit commanders to ensure that newly arrived soldiers do not remain in Class 4 for over 60 days after arrival or in Class 3 for over 6 months after arrival. Appointments will be made available on a priority basis for soldiers in Class 3 and 4.
- (d) Make appointments available to support the requirement for annual dental examinations.
- (e) Provide monthly updates to the unit or its supporting personnel activity on changes in soldiers' dental classification and date of last dental examination.
- (f) Conduct a 100 percent audit of dental records at least once a year (in conjunction with one of the semiannual records screenings required by AR 40-66, para 5-9) to ensure accuracy of the dental fitness classification on the unit's Oral Health Fitness Program roster.

7. Preventive Dentistry Program for Children (PDPC)

- a. Objective. This program establishes policy, procedures, and responsibilities for establishing and operating preventive dentistry services for children.
- b. Policy. The most advanced, standardized program of preventive dental care will be provided for children throughout the Army community.
 - c. Procedures.
- (1) Each DENTAC/dental unit will establish and operate the PDPC at Department of Defense dependent schools

(DODDS) or at each facility under it. miss diction that has a dental treatment cap with ty and that is located in an area having a population of eligible children

- (2) With the consent of the child's parent or guardian and within the constraints of available space and resources, DENTAC/dental units/dental clinics will provide—
- (a) To each child, at least annually, an oral screening examination, topical application of an anticariogenic agent, and oral health instruction.
- (b) To children, when deemed appropriate by a dental officer, mouthguards and placement of pit and fissure sealants.
- (c) To DODDS, materiel support and technical direction for a weekly program of 0.2 percent sodium fluoride mouth rinses.
- (d) Technical direction in the establishment of safety procedures and monitoring procedures for the use and storage of fluoride solutions.
- (e) Weekly fluoride mouth rinses under the administrative supervision of DODDS.
- (3) To be eligible for participation in the PDPC, a child will be covered by section 1072(2)(D), title 10, United States Code. Participation will be voluntary.
- (4) The operation of the PDPC will not interfere with necessary dental services for active duty soldiers or with emergency care.

8. Clinical Preventive Dentistry Program

The Clinical Preventive Dentistry Program includes all aspects of preventive dentistry usually accomplished within the dental treatment facility and for hospital inpatients

- a. Plaque control management and preventive dentistry counseling. Patients should be counseled on their dental health needs. Patient counseling may include the following:
 - (1) Self-evaluation methods.
 - (2) Plaque control techniques.
 - (3) Adjunctive oral hygiene devices.
 - (4) Diet and nutrition.
- (5) Interrelationship of oral health and general health.
- b. Dental prophylaxis. Active duty soldiers and other eligible beneficiaries should be provided with a thorough dental prophylaxis if needed. Unless contraindicated, an approved topical anticariogenic agent should be applied as recommended by TSG's consultant in public health dentistry.

9. Community Preventive Dentistry Program

- a. Fluoridation of community water supply. Controlled fluoridation of the community water supply is the principal community dental public health measure.
- (1) Fluoridation of post water supplies should take place when—
- (a) The level of natural fluoridation is less than one-half the optimal concentration for that climate.
- (b) There are an appreciable number of children residing on post.

- (c) The fluoridation process is otherwise considered practical and feasible. (See TB MED 576.)
- (2) It is the responsibility of the DFO to advise 'he preventive medicine officer and instal: engineer concerning the proper concentiation of fluoride. Where natural fluoridation exceeds acceptable levels, defluoridation measures should be recommended.
- b. Alternative fluoride administration. Programs for alternative fluoride administration, such as fluoride supplements and schools rinse programs, should be available for family members who are not drinking fluoridated water. The DFO will advise physicians and dentists on professional guidelines for prescribing fluorides.
- c. Child neglect. A system for reporting identified dental conditions that involve child abuse or neglect will be coordinated with the local Family Advocacy Program per AR 608-1. An example of child abuse would be head or facial injuries inconsistent with the stated cause. If parents have been informed of dental abscesses, large carious lesions, or extensive periodontal disease, but have not taken corrective action, referral for child neglect may be indicated. Highest priority for space available care should be given to these children.
- d. Community education. The DFO and CHDH will actively seek as many avenues of public health education as possible, using methods appropriate to the target audience, the objectives of the program, and the available media.

10. Preventive Dentistry Report (RCS MED-399)

- a. A preventive dentistry report will be submitted quarterly. This report is to originate at the DENTAC/dental unit level and will be submitted to the HSC/major command preventive dentistry consultant semi-annually. It will be in a format prescribed by the major medical command. Data for the reporting period of 1 October to 31 March will be submitted from the DENTAC or dental unit level to the major medical command preventive dentistry consultant by 30 April. The 1 April to 30 September report will be due by 31 October.
- b. A copy of the report will be furnished to the installation commander.
- c. The HSC/major command preventive dentistry consultant will consolidate the reports and report to TSG's consultant in public health dentistrymajor medical command preventive dentistry consultant will consolidate subordinate units' preventive dentistry reports and report to TSG's Consultant in Dental Public Health in a format prescribed by TSG. These consolidated reports are due by 31 May and 30 November.
- d. In cases where a DENTAC/dental unit's major command has no preventive dentistry consultant, the report will be forwarded directly to TSG's consultant in public health dentistry.
- e. The reports will contain comments and data as appropriate to reflect efforts in

- the four major areas of the Army Preventive Dentistry Program as outlined in paragraphs 6 through 9. To provide uniformity, the following headings will be used
- (1) Oral Health Fitness Program. This paragraph should be a narrative statement of how the Oral Health Fitness Program is being complied with by the units served by the DENTAC/dental unit. It should include the date of the annual 100 percent audit of records and the total number and percent in each classification.
- (2) Preventive Dentistry Program for Children. This paragraph should include a list of DOD schools, by name, that are complying with the Preventive Dentistry Program for Children (DODI 6230.3), and a list of those schools not complying. It should also include the number of sextants of pit and fissure scalants applied by the DENTAC/dental unit during the reporting period.
- (3) Clinical Preventive Dentistry Program. This paragraph should include the number of prophylaxes and number of topical fluoride applications performed by the DENTAC/dental unit by category of patient (active duty, family member, retired, other).
- (4) Community Preventive Dentistry Program. This paragraph should include a statement concerning compliance with the community water fluoridation program (if applicable), and all Community Preventive Dentistry Program educational efforts participated in by the DENTAC/dental unit during the reporting period.

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